

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1 - 11. (Canceled)

12. (Currently Amended) A plasma generating electrode comprising:

_____ at least two plate-shaped unit electrodes each of which faces each other and ~~capable of generating~~ configured to generate plasma upon application of a voltage between the unit electrodes, at least one of the unit electrodes each of which faces each other including a plate-shaped ceramic dielectric having a plurality of grooves ~~and/or~~ a plurality of recesses formed in at least one surface, and

_____ a conductive film ~~disposed inside~~ embedded within the ceramic dielectric, the plasma generating electrode configured to generate ~~capable of generating~~ high-density plasma in the vicinity of edges formed by a surface of the ceramic dielectric and side surfaces of the grooves ~~and/or~~ the recesses upon application of a voltage between the unit electrodes, the high-density plasma having a density higher than that of plasma generated between the unit electrodes in an area other than the vicinity of the edges.

13. (Currently Amended) The plasma generating electrode according to claim 12, wherein the grooves ~~and/or~~ the recesses are formed in an area corresponding to 20 to 80% of an area of the surface of the ceramic dielectric, and assuming that ~~the surface forms a~~ continuous plane.

14. (Currently Amended) The plasma generating electrode according to claim 12, wherein each of the grooves ~~and/or~~ the recesses has a thickness from the surface of the ceramic dielectric to a bottom of the groove ~~and/or~~ the recess of 3 to 200 μm .

15. (Currently Amended) The plasma generating electrode according to claim 12, wherein each of the grooves ~~and/or~~ the recesses has a thickness from the surface of the

ceramic dielectric to a bottom of the groove ~~and/or~~ the recess of 1/3 or less of an average thickness of the ceramic dielectric.

16. (Currently Amended) A plasma reactor comprising:

_____ a plasma generating electrode comprising:

_____ at least two plate-shaped unit electrodes each of which faces each other and configured to generate ~~capable of generating~~ plasma upon application of a voltage between the unit electrodes, at least one of the unit electrodes each of which faces each other including a plate-shaped ceramic dielectric having a plurality of grooves ~~and/or~~ a plurality of recesses formed in at least one surface, and

_____ a conductive film ~~disposed inside~~ embedded within the ceramic dielectric, the plasma generating electrode configured to generate ~~capable of generating~~ high-density plasma in the vicinity of edges formed by a surface of the ceramic dielectric and side surfaces of the grooves ~~and/or~~ the recesses upon application of a voltage between the unit electrodes, the high-density plasma having a density higher than that of plasma generated between the unit electrodes in an area other than the vicinity of the edges, and

_____ a casing having a passage (gas passage) for a gas containing a specific component formed therein, wherein, when the gas is introduced into the gas passage of the casing, the specific component contained in the gas ~~can be~~ is reacted using plasma generated by the plasma generating electrode.

17. (Previously Presented) The plasma reactor according to claim 16, further comprising a pulsed power supply for applying a voltage to the plasma generating electrode.

18. (Previously Presented) The plasma reactor according to claim 17, wherein the pulsed power supply includes at least one SI thyristor.

19-22. (Canceled)

23. (New) The plasma generating electrode according to claim 12, wherein at least one of the two plate-shaped unit electrodes has grooves and/or recesses on both surfaces of the plate-shaped ceramic dielectric.

24. (New) The plasma reactor according to claim 16, wherein at least one of the two plate-shaped unit electrodes has grooves and/or recesses on both surfaces of the plate-shaped ceramic dielectric.